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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,469	02/07/2006	Martin Meinke	32860-000993/US	8705
30596 7590 01/11/2007 HARNESS, DICKEY & PIERCE, P.L.C. P.O.BOX 8910 RESTON, VA 20195			EXAMINER CERULLO, JEREMY S	
			ART UNIT 2111	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/567,469

Applicant(s)

MEINKE ET AL.

Examiner

Jeremy S. Cerullo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 20060207, 20060321.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-18 are pending in the following action.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1-3, 6-8, 10-11, 14, 16, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,037,857 ("Behrens" et al.).

5. As for Claim 1, Behrens discloses a bus module (Figure 3, Item 30') for connecting an automation unit (Figure 2, Item 12) to a backplane bus usable to transport at least one of data and power (Column 6, Lines 4-12), which said bus module having at least one bus connecting device for connection to the backplane bus (Column 6, Line 64 – Column 7, Line 4) and at least one unit connecting device (Figure 3, Items 74, 76, and 78), including a serial optical interface, for connection to the automation unit, with the unit connecting device having a coupling element usable to set up a point-to-point communication link to the automation unit (Column 11, Lines 10-16).

6. As for Claim 2, Behrens further discloses that the coupling element includes a bus ASIC (Figure 7).

7. As for Claim 3, Behrens further discloses that the unit connecting device includes a microcontroller to control the serial optical interface (Figure 3, Items 74 and 76).

8. As for Claim 6, the optical interface of Behrens is bi-directional, and as such it is inherent that it operates in at least one of half-duplex and full-duplex modes.

9. As for Claim 11, Behrens further discloses that the unit connecting device includes a microcontroller to control the serial optical interface (Figure 3, Items 74 and 76).

10. As for Claim 7, Behrens discloses a bus module (Figure 3, Item 30') for connecting an apparatus (Figure 2, Item 12) to a backplane bus usable to transport at least one of data and power (Column 6, Lines 4-12), which said bus module having at least one bus connecting device for connection to the backplane bus (Column 6, Line 64 – Column 7, Line 4) and at least one unit connecting device (Figure 3, Items 74, 76, and 78), including a serial optical interface, for connection to the apparatus, with the unit connecting device having a coupling element usable to set up a point-to-point communication link to the automation unit (Column 11, Lines 10-16).

11. As for Claim 8, Behrens further discloses that the unit connecting device includes a microcontroller to control the serial optical interface (Figure 3, Items 74 and 76).

12. As for Claim 10, the optical interface of Behrens is bi-directional, and as such it is inherent that it operates in at least one of half-duplex and full-duplex modes.

13. As for Claim 14, the optical interface of Behrens is bi-directional, and as such it is inherent that it operates in at least one of half-duplex and full-duplex modes.

14. As for Claim 16, Behrens discloses a bus module (Figure 3, Item 30') for connecting an apparatus (Figure 2, Item 12) to a backplane bus usable to transport at least one of data and power (Column 6, Lines 4-12), which said bus module having at least one bus connecting device for connection to the backplane bus (Column 6, Line

64 – Column 7, Line 4) and at least one unit connecting device (Figure 3, Items 74, 76, and 78), including a serial optical interface and control means for controlling the optical interface, for connection to the apparatus, with the unit connecting device having a coupling element usable to set up a point-to-point communication link to the automation unit (Column 11, Lines 10-16).

15. As for Claim 18, the optical interface of Behrens is bi-directional, and as such it is inherent that it operates in at least one of half-duplex and full-duplex modes.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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18. Claims 4-5, 9, 12-13, 15, and 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Behrens as applied to claims 1-3, 6-8, 10-11, 14, 16, and 18 above, and further in view of what is old and well known in the art.

19. As for Claims 4-5, Behrens teaches all of the limitations inherited from Claim 1, and Behrens teaches a communication line between the modules, but Behrens is silent as to the specific interface that communicates along that line after data is sent through the optical interface. The examiner takes OFFICIAL NOTICE that it is old and well known in the art to use universal asynchronous receiver/transmitters (UARTs) for transmitting and receiving serial signals (as evidenced by The Microsoft Press Computer Dictionary, Second Edition). It would have been obvious to one of ordinary skill in the art at the time of the invention to have used UARTs within the coupling element to communicate across the serial data line in the system of Behrens, as they are a common, simple way to enable serial communication.

20. As for Claims 9, Behrens teaches all of the limitations inherited from Claim 7, and Behrens teaches a communication line between the modules, but Behrens is silent as to the specific interface that communicates along that line after data is sent through the optical interface. The examiner takes OFFICIAL NOTICE that it is old and well known in the art to use universal asynchronous receiver/transmitters (UARTs) for transmitting and receiving serial signals (as evidenced by The Microsoft Press Computer Dictionary, Second Edition). It would have been obvious to one of ordinary skill in the art at the

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time of the invention to have used UARTs within the coupling element to communicate across the serial data line in the system of Behrens, as they are a common, simple way to enable serial communication.

21. As for Claim 15, the optical interface of Behrens is bi-directional, and as such it is inherent that it operates in at least one of half-duplex and full-duplex modes.

22. As for Claims 12, Behrens teaches all of the limitations inherited from Claim 2, and Behrens teaches a communication line between the modules, but Behrens is silent as to the specific interface that communicates along that line after data is sent through the optical interface. The examiner takes OFFICIAL NOTICE that it is old and well known in the art to use universal asynchronous receiver/transmitters (UARTs) for transmitting and receiving serial signals (as evidenced by The Microsoft Press Computer Dictionary, Second Edition). It would have been obvious to one of ordinary skill in the art at the time of the invention to have used UARTs within the coupling element to communicate across the serial data line in the system of Behrens, as they are a common, simple way to enable serial communication.

23. As for Claims 13, Behrens teaches all of the limitations inherited from Claim 8, and Behrens teaches a communication line between the modules, but Behrens is silent as to the specific interface that communicates along that line after data is sent through the optical interface. The examiner takes OFFICIAL NOTICE that it is old and well known in the art to use universal asynchronous receiver/transmitters (UARTs) for

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transmitting and receiving serial signals (as evidenced by The Microsoft Press Computer Dictionary, Second Edition). It would have been obvious to one of ordinary skill in the art at the time of the invention to have used UARTs within the coupling element to communicate across the serial data line in the system of Behrens, as they are a common, simple way to enable serial communication.

24. As for Claims 17, Behrens teaches all of the limitations inherited from Claim 16, and Behrens teaches a communication line between the modules, but Behrens is silent as to the specific interface that communicates along that line after data is sent through the optical interface. The examiner takes OFFICIAL NOTICE that it is old and well known in the art to use universal asynchronous receiver/transmitters (UARTs) for transmitting and receiving serial signals (as evidenced by The Microsoft Press Computer Dictionary, Second Edition). It would have been obvious to one of ordinary skill in the art at the time of the invention to have used UARTs within the coupling element to communicate across the serial data line in the system of Behrens, as they are a common, simple way to enable serial communication.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy S. Cerullo whose telephone number is (571)

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272-3634. The examiner can normally be reached on Monday - Thursday, 8:00-4:00;
Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (571) 272-3632. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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